# INDEX OF AUTHORS' NAMES.

## TRANSACTIONS. 1883.


### A.

Abel, Sir F., and W. H. Deering, notes on the condition in which carbon exists in steel, 303.

Atkinson, R. W., some compounds of antimony and bismuth containing two halogens, 289.

### B.

Beilby, G., on the specific gravity of paraffin, solid, fused, and in solution, 388.

Bevan, E. J. See Cross.

Brauner, B., contributions to the chemistry of the cerite metals, 278.

### C.

Campbell, Dugald, obituary notice of, 252.

Claparède, A., and Watson Smith, on a bye-product of the manufacture of aurin, 358.

Cleve, Professor P. T., on samarium and its compounds, 362.

Cowper, R., on the action of chlorine on certain metals, 153.

Cross, C. F., and E. J. Bevan, contributions to the chemistry of lignification, 18.

—— —— on the oxidation of cellulose, 22.

### D.

Dale, R. S., and C. Schorlemmer, the phenates of amido-bases, 185.

Deering, W. H. See Abel.

Divers, Edward, on the production of hydroxylamine from nitric acid, 443.

Divers, Edward, and M. Shimosé on a new oxide of tellurium, 319.

—— —— on a new reaction of tellurium compounds, 329.

—— —— on tellurium sulphoxide, 323.

Dyson, Gibson, on some compounds of phenols with amido-bases, 466.

Dyson, S., on certain brominated carbon compounds obtained in the manuture of bromine, 36.

### F.

Flight, W., two new aluminous mineral species, Evigtokite and Liskeardite, 140.

Foster, W., the behaviour of the nitrogen of coal during destructive distillation, with some observations on the estimation of nitrogen in coal and coke, 105.

Frankland, P. F., and F. Jordan, on the gases evolved during the conversion of grass into hay, 294.

Frankland, P. F., and T. Turner, note on the action of allylic iodide upon phenol in presence of zinc or aluminium-foil, 357.

### G.

Gilbert, J. H. See Lawes.

Gladstone, J. H., and A. Tribe, laboratory notes, 341.

Graves, E. E. See Plimpton.

Gray, John, obituary notice of, 252.

Griffiths, A. B., chemico-microscopical researches on the cell-contents of certain plants, 195.

Grosjean, B. J., obituary notice of, 253.

Grosjean, late J. B., contributions to the chemistry of tartaric and citric acid, 331.

H.

Hatton, Frank, obituary notice of, 257.
Hartley, W. N., on homologous spectra, 390.
—— on the spectrum of beryllium, with observations relative to the position of that metal among the elements, 316.
Hodgkinson, W. R., and F. E. Matthews, note on derivatives of fluorene, $C_{13}H_{20}$, 163.

J.

Jackson, Herbert, note on the action of sulphuric acid (sp. gr. 1·84) upon potassium iodide, 339.
James, J. William, on ethylene chlorobromide and some compounds obtained from it, 37.
Japp, F. R., on the condensations of compounds which contain the dicarbonyl-group with aldehydes and ammonia, 197.
—— on the constitution of lophine (second notice), 9.
Japp, F. R., and F. W. Streatfeild, on the condensation-products of phenanthraquinone with ethylic acetoacetate, 27.
Jesseman, Alexander, obituary notice of, 254.
Jordan, F. See Frankland.

L.

Lawes, Sir J. B., J. H. Gilbert, and R. Warington, contribution to the chemistry of "Fairy rings," 208.

M.

Masson, Orme, the action of nitrous anhydride on glycerol, 348.
Matthews, F. E., on some condensation-products of aldehydes with acetoacetic ether and with substituted acetoacetic ethers, 200.
Matthews, F. E. See Hodgkinson.
McLeod, Herbert, on evaporation *in vacuo*, 384.
Meldola, R., on the constitution of some bromine-derivatives of naphthalene (third notice), 1.
—— researches on secondary and tertiary azo-compounds, No. 1, 425.
Mills, E. J., and J. Takamine, on the absorption of weak reagents by cotton, silk, and wool, 142.
Morley, H. F., and W. J. Saint, thioxalic ether, 400.

N.

Nicol, W. W. J., on the volume alteration attending the mixture of salt solutions, 135.

O.

O'Shea, L. T., a contribution to the history of the constitution of bleaching powder, 410.

P.

Pearce, G. A. C., obituary notice of, 254.
Perkin, A. G., on some derivatives of diphenylene ketone oxide, 187.
Perkin, W. H., note on the preparation of dipbenylene ketone oxide, 35.
—— preliminary note on some diazo-derivatives of nitrobenzyl cyanide, 111.
Perkin, W. H., Junr., on the condensation-products of isobutaldehyde obtained by means of alcoholic potash, 90.
—— on the condensation-products of œnanthaldehyde (Part I), 45.
—— on the condensation-products of œnanthaldehyde (Part II), 67.
Pickering, S. U., note on a basic ammonio-copper sulphate, 336.
—— on the constitution of molecular compounds; the molecular weight of basic ferric sulphate, 182.
Piesse, G. W. S., obituary notice of, 255.
Plimpton, R. T., and E. E. Graves, on a new method of estimating the halogens in volatile organic compounds, 119.

S.

Saint, W. J. See Morley.
Schorlemmer, C. See Dale.
Shaw, S., on the preparation of the pentathionates, 351.
Shenstone, W. A., a modified Liebig's condenser, 123.
—— the alkaloïds of Nux Vomica, No. II, on brucine, 101.
Shimosé, M. See Divers.

Smith, Professor H. J. S., obituary notice of, 255.
Smith, Watson, note on pentathionic acid in connection with the foregoing paper on "the preparation of the pentathionates," 355.
Smith, Watson. See Claparède.
Smithells, A., on some fluorine compounds of uranium, 125.
Solly, R. H., crystallographic examination of the crystals of antimoniopotassic chlorobromide, 293.
Streatfeild, F. W. See Japp.
Stuart, C. M., on the condensation-products formed by benzaldehyde with malonic and isosuccinic acids, 403.

T.

Takamine, J. See Mills.
Thomas, E. G. P. See Witt.
Thorne, L. T., note on an apparatus for fractional distillation under reduced pressures, 301.
Tribe, A. See Gladstone.
Turner, T. See Frankland.

V.

Veley, V. H., the rate of decomposition of ammonium nitrate, 370.

W.

Warington, R. See Lawes.
Webster, C. S., the analysis of certain plant fibres, 23.
Wilcock, Edgar, obituary notice of, 255.
Witt, Otto N., and E. G. P. Thomas, researches on the induline group (Part I), 112.
Wöhler, Friedrich, obituary notice of, 258.
Wright, Lewis T., on the estimation of hydrogen sulphide and carbonic anhydride in coal-gas, 267.
—— some notes on hydrated ferric oxide and its behaviour with hydrogen sulphide, 156.

Y.

Yoshida, Hikorokuro, chemistry of lacquer (Urushi), Part I, 472.
Young, Sydney, on $\alpha$-ethylvalerolactone, $\alpha$-ethyl-$\beta$-methylvalerolactone, and on a remarkable decomposition of $\beta$-ethylacetosuccinic ether, 172.

# INDEX OF SUBJECTS.

## TRANSACTIONS. 1883.

### A.


Acenaphthalide, bromnitro-, 9.
—— orthobrom-, action of bromine on, 7.
—— tetrabrom-, 8.
Acetaldehyde, action of alcoholic potash on, 88.
α-Acetofurfuracrylic ether, 204.
Acetofurfurylidene acetic ether, 204.
Acetoisoamylidene acetic ether, 202.
Acetoisobutylidene acetic ether, 202.
α-Acetotrichlorcrotonic ether, 203.
Acetotrichlorethylidene acetic ether, 203.
Acid, $C_{14}H_{28}O_2$, 75.
Acids, absorption of different acids by wool and silk from mixtures of, 149.
Acraldehyde, condensation of, with acetoacetic ether, 204.
Alcohol, alleged tests for, 346.
—— $C_{14}H_{30}O$, and its acetate, 56, 57, 76.
Aldehyde, $C_{20}H_{38}O_4$, 96, 97.
Aldehydes with acetoacetic ether and with substituted acetoacetic ethers, some condensation-products of, 200.
Allyl iodide, action of, on phenol, in presence of zinc- or aluminium-foil, 357.
Aluminium spectrum, 396.
Amidazobenzene, action of, on aniline hydrochloride, 112.
—— preparation of, 113.
Amido-bases, phenates of, 185.
Ammonio-copper sulphate, basic, 336.
Ammonium nitrate, melting point and point of decomposition of, 374.
—— —— purification of, 374.
—— —— rate of decomposition of, 370.
Aniline, paranitro-, diazotised, action of, on primary monamines, 428.
—— —— preparation of (foot-note), 427.
—— aurinate, 472.
—— hydrochloride, action of amidazobenzene on, 112.
—— β-naphthate, 469.
Aniline phenate, 186, 466.
Anniversary meeting, 224.
Antimonio-potassic chlorobromide, crystallographic examination of the crystals of, 293.
Antimony, action of chlorine on, 154.
—— some compounds of, containing two halogens, 289.
Apparatus for fractional distillation under reduced pressures, 301.
Arsenic, action of chlorine on, 154.
Aurin, a bye-product of the manufacture of, 358.
—— red, or peonine, 186.
Azobenzil, Zinin's, 11.
Azo-compounds, secondary and tertiary, researches on, 425.
—— tertiary, 436.
Azophenine, 115.


### B.


Balance-sheet of the Chemical Society from March 24, 1882, to March 21, 1883, 265.
—— —— Research Fund from March 24, 1882, to March 21, 1883, 266.
Bastin, tetrachloro-, 20.
Benzaldehyde, condensation of, with mono- and di-ethylacetoacetic ether, 205, 206.
—— with malonic and isosuccinic acids, condensation-products formed by, 403.
Benzalmalonic acid, 405.
—— —— paranitro-, 409.
Benzeneazoamidometaxylene, paramido-, 432.
—— paranitro-, 428.
Benzeneazoamido-α-naphthalene, paramido-, 432.
—— paranitro-, 430.
Benzeneazoamido-β-naphthalene, paranitro, 430.
—— —— reduction of, 433.
Benzeneazodiphenylamine, paranitro- and paramido-, 440.
Benzeneazometaxylene-azo-α-naphthol, paranitro-, 435.

Benzeneazometaxylene-azo-β-naphthol, paranitro-, 434.
Benzeneazometaxylene-azo-α- and β-naphtholsulphonic acid, paranitro-, 435.
Benzeneazometaxylene-azophenol, paranitro-, 435.
Benzeneazometaxylene-azoresorcinol, paranitro-, 436.
Benzil, action of aldehydes together with ammonia on, 17.
Benzoquinone, 433.
Benzyl cyanide, nitro-, diazo-derivatives of, 111.
Bergamot juice, determinations of free and precipitable acid in, 333, 334.
Beryllium, spectrum of, with observations relative to the position of that metal among the elements, 316.
Bismuth, action of chlorine on, 154.
—— some compounds of, containing two halogens, 289.
Bleaching powder, action of water on, 422.
—— —— history of the constitution of, 410.
Boron spectrum, 397.
Bromine, certain brominated carbon compounds obtained in the manufacture of, 36.
Bromoform obtained in the manufacture of bromine, 36.
Brucine, 101.
—— action of hydrochloric acid on, 102.

## C.

Cadmium spectrum, 395.
Cane-sugar, action of light and heat on, 341.
—— influence of light, atmospheric germs, and air on, 343.
Carbon compounds, brominated, obtained in the manufacture of bromine, 36.
Carbonic anhydride, estimation of, in coal-gas, 267.
Cell-contents of certain plants, chemico-microscopical researches on, 195.
Cellulose, nitro-, 23.
—— oxidation of, 22.
Cerite metals, chemistry of, 278.
Chloral, condensation of, with aceto-acetic ether, 202.
Chlorobromoform, 36, 37.
Cinnamic acid, orthonitro-, preparation of, 408.
Cinnamic ether, ortho- and para-nitro-, preparation of, 408.
Cinnamyldiethylacetic ether and its dibromide, 205, 207.
Cinnamylmonorthylacetic ether, 207.
Citric acid, chemistry of, 331.
—— —— determination of, in lemon and other juices, 332.
—— —— different rate of loss of different specimens of, in dry air, 331.
Coal, behaviour of the nitrogen of, during destructive distillation; with some observations on the estimation of nitrogen in coal and coke, 105.
—— estimation of nitrogen in, 105.
Coal-gas, estimation of hydrogen sulphide and carbonic anhydride in, 267.
Coke, estimation of nitrogen in, 105.
Compounds which contain the dicarbonyl-group, with aldehydes and ammonia, condensations of, 197.
Copper spectrum, 396.
Copper-zinc couple, reaction of, with nitric oxide, 346.
Cotton, absorption of weak reagents by, 142.
Crotonaldehyde, preparation of, 88.

## D.

Dicarbonyl-group, condensations of compounds which contain, with aldehydes and ammonia, 197.
Didymium, atomic weight of, 278.
—— complex nature of, 281.
—— examination of the different constituents of, 285.
Didymium-γ, 281, 285.
Diethylacetoacetic ether, condensation of benzaldehyde with, 205.
Dihydroxydiphenyl, 169.
Dioxyphenolketone, 187.
Diphenylamine, action of diazoparanitrobenzene on, 440.
Diphenylene ketone, dibromo-, 165.
—— oxide, note on the preparation of, 35.
—— —— some derivatives of, 187.
—— —— diamido-, and its hydrochloride, 191.
—— —— dibromo-, 194.
—— —— dinitro-, and the action of reducing agents on, 190.
—— —— disulphonic acid and its barium salt, 193.
Dutch metal, action of chlorine on, 154.

## E.

α-Ethyl-β-acetopropionic acid, 173.
—— —— anhydride obtained by the distillation of, note on, 180.

β-Ethylacetosuccinic ether, remarkable decomposition of, 172, 175.
Ethylene chlorobromide and some compounds obtained from it, 37.
—— —— preparation of (Maxwell Simpson's method), 37.
Ethylene chlorothiocyanate, action of sodium sulphite on, 40.
—— —— preparation of, 39.
Ethylene dibromide, action of normal sodium sulphite on, 43.
Ethylene dithiocyanate, 40.
Ethylenethiocyanosulphonic acid, formation of, 40.
Ethylic phenanthroxylene-acetoacetate, and the action of hydriodic acid on, 28, 29.
Ethylic phenanthroxyleneacetoacetate, bromo-, 29.
—— α-phenanthroxyleneisocrotonate, and its behaviour towards caustic alkalis, 31.
—— propyl pinacone, isomeride of, 94.
Ethylmethylsuccinic acid, 180.
α-Ethyl-β-methylvalerolactone, 172, 178.
Ethyloxalic acid, potassium salt of, 402.
α-Ethyloxyvaleric acid and its salts, 174.
Ethylsuccinic acid, 178.
Ethylsulphonic acid, preparation of the amide of, 42.
Ethylsulphonic acid, β-chlor-, salts of, 41.
Ethylsulphonic chloride, β-chlor-, and the action of ammonia on an ethereal solution of, 42.
α-Ethylvalerolactone, 172.
Evaporation of water in a vacuum, and apparatus for, 384.
Evigtokite, 140.

## F.

Fairy-ring fungus, composition of the ash of one species of, 212.
—— —— soils, preparation and analysis of, 215.
Fairy rings, chemistry of, 208.
Ferric oxide, hydrated, and its behaviour with hydrogen sulphide, 156.
Ferric sulphate, basic, molecular weight of, 182.
Fluorene, $C_{13}H_{10}$, some derivatives of, 163.
—— chloro-derivatives of, 170.
—— α-dibromo-, 164.
—— dibromo-, fusion of, with potash, 170.
—— dichloro-, 170.
—— monobromo-, 165.
Fluorenesulphonic acid, α-dibromo-, 172.
Fluorine, compounds of uranium, some, 125.
Fractional distillation under reduced pressures, apparatus for, 301.
Furfural, condensation of, with acetoacetic ether, 204.

## G.

Gadolinite earths from cerite, 288.
Gases evolved during the conversion of grass into hay, 294.
Glycerol, action of nitrous anhydride on, 348.
Glyceryl trinitrite, 349.
Glyoxaline, constitution of (foot note), 16.
Grass, decomposition of, under water, 298.
—— gases evolved during the conversion of, into hay, 294.
Gum from Urushi, examination of, 481.

## H.

Halogens, new method of estimating, in volatile organic compounds, 119.
Heptoic acid, 48, 59, 69.
Heptolactone, 172.
β-Heptyl-heptyl alcohol, ($C_{14}H_{28}O$), 54, 56, 63, 66.
Heptyl-pentylacetic acid, ($C_{14}H_{28}O_2$), 75, 79.
β-Heptyl-pentyl-ethyl alcohol, ($C_{14}H_{28}O$), 54, 56, 63, 66.
Hexoic acid, 59.
Hexyl-pentyl-acrylaldehyde, ($C_{14}H_{26}O$), 49, 51, 53, 57, 61, 65, 81.
Hexyl-pentyl-acrylic acid, ($C_{14}H_{26}O_2$), 48, 62, 66.
Hydric chloride, absorption of, by wool, silk, and cotton, 145, 147, 148.
—— sulphate, absorption of, by wool, silk, and cotton, 144, 146, 148.
Hydrogen pertelluride, 330.
—— sulphide, estimation of, in coal-gas, 267.
Hydroxylamine, formation of, by the reduction of nitrates, 344.
—— production of, from nitric acid, 443.
—— reduction of nitrous acid to, 454.

## I.

Induline B, and its hydrochloride, 116.
—— 3B, 116.

Induline, 6B, 117.
Induline-group, researches on, Part I, 112.
Indulines, process for the production of, on the large scale, 113.
Invert sugar, action of light and heat on, 341.
Iodine, recovery of, from organic iodine residues, 345.
Iron sulphides, action of potassium cyanide on, 163.
Isobutaldehyde, condensation-products of, obtained by means of aqueous and alcoholic potash, 90.
Isobutaldehyde, polymeride of, 86.
Isobutylic aldehyde, condensation of, with acetoacetic ether, 201.
Isophenylcrotonic acid, 404, 407.
Isosuccinic acid, condensation-products formed by benzaldehyde with, 403.
Isovaleraldehye, polymeride of, 86.

## K.

Ketolactonic acid, 175, 179.
—— —— action of barium hydrate on, 176.
—— —— constitution of, 181.
"Ki-urushi," 473.

## L.

Laboratory notes, 341.
Lacquer (urushi), chemistry of, Part I, 472.
Lead, spongy, reducing action of, 347.
Lecture experiment, 447.
Lemon and other juices, concentrated, determinations of free and precipitable acid in, 333.
Liebig's condenser, a modified form of, 123.
Lignification, contributions to the chemistry of, 18.
Lignose, note on the constitution of, 20.
Lime juice, determinations of free and precipitable acid in, 333, 334.
Liskeardite, 140.
Lophine, constitution of, 9.
—— oxidation of, 15.

## M.

Magnesium, action of chlorine on, 154.
Magnesium spectrum, 392.
Malonic acid, condensation-products formed by benzaldehyde with, 403.
*Marasmius oreadum*, 212.
Mercury, action of chlorine on, 155.
Metals, action of dry chlorine on, 153.
Metatartaric acid in factory liquors, 336.
Metaxylidine, action of diazoparanitrobenzene salts on, 428.
γ-Methylene-diphenylene, 164.
α-Methylene-diphenylenesulphonic acid, and fusion of the potassium salts with potash, 166.
Methylglyoxaline, formula of, 198.
Mineral species, two new aluminous, evigtokite and liskeardite, 140.
"Mokuyiki," 473.
Molecular compounds, constitution of, 182.
Monamines, primary, action of diazotised paranitraniline on, 428.
—— secondary, action of diazotised paranitraniline on, 440.
Monethylacetoacetic ether, condensation of benzaldehyde with, 206.
Myristic aldehyde, isomeric, ($C_{14}H_{28}O$), 68, 71, 73, 76.

## N.

Naphthalene, constitution of some bromine-derivatives of, 1.
—— β-dibromo-, constitution of, 3.
—— orthodibromo-, constitution of, 5.
—— tribromo-, constitution of, 4.
Naphthalenes, dibromo-, 1.
β-Naphtholparazobenzene-azodiphenylamine, 441.
β-Naphtholparazobenzene-azometaxylene-azo-β-naphthol, 439.
β-Naphtholparazobenzene-azo-α-naphthalene-azo-β-naphthol, 437.
β-Naphtholparazobenzene-azo-α-naphthalene-azo-β-naphtholdisulphonic acid, 438.
β-Naphtholparazobenzene-azo-α-naphthalene-azophenol, 439.
β-Naphtholparazobenzene-azo-α-naphthalene-azoresorcinol, 439.
α-Naphthoquinone, 433.
α- and β-Naphthylamine, action of diazoparanitrobenzene on, 430.
Naphthylamine phenate, 468.
Nitric acid, nature of the reduction of, by metals, 455.
Nitric oxide, reaction of the copper-zinc couple on, 346.
Nitroamidoazo-compounds, reduction of, 432.
Nitroazo-compounds, secondary, 434.
Nitrogen, estimation of, in coal and coke, 105.

Nitronates, 455, 466.
Nitrous acid, reduction of, to hydroxylamine, 454.
Nux vomica, alkaloïds of, 101.

## O.

Obituary notices, 251.
Octylacetoacetic acid, isomeride of, 92, 94.
Œnanthaldehyde, action of nascent hydrogen on, 67.
—— action of potash on, 47.
—— action of zinc chloride on, 50.
—— condensation-products of, 45, 67.
—— polymeride of, decomposition-products of, 81.
—— polymerisation of, 79.
—— polymerised, action of nascent hydrogen on, 86.
Oil of vitriol, residual phenomenon of the electrolysis of, 345.
Orange juice, determination of free and precipitable acid in, 333, 334.
Organic compounds, volatile, new method of estimating the halogens in, 119.
Oxaline, general formula of an: foot-note, 198.
Oxalmethyline, formula of, 198.
Oxamethane, 401.
Oxycellulose, 22.
γ-Oxyethylvaleric acid, 177.
Oxyurushic acid, 486.

## P.

Paraffin, solid, fused, and in solution, sp. gr. of, 388.
Paraisobutaldehyde, 86.
Paranitraniline, preparation of, foot-note, 427.
Paraoxalmethyline, Wallach's, synthesis of, foot-note, 17.
Pentathionates, preparation of, 351.
Pentathionic acid, note on, 355.
Peonine, or red aurin, 186.
Phenanthraquinone, condensation-product of, with ethylic aceto-acetate, 27.
—— formula of, foot-note, 13.
Phenates of amido-bases, 185.
Phenol, action of allylic iodide on, in presence of zinc or aluminium-foil, 357.
Phenols, some compounds of, with amido-bases, 466.
Phenyl ortho-oxalic ether, 360.
Plant fibres, certain, analysis of, 23.
—— —— reactions of, 25.
Plants, certain, chemico-microscopical researches on the cell-contents of, 195.
Poison, volatile, in Urushi, 475.
Potassium, action of chlorine on, 155.
—— fluoxyuranate, 130.
—— iodide, action of sulphuric acid on, 339.
Propyl phenol, 358.

## R.

Reagents, weak, absorption of, by cotton, silk, and wool, 142.
Research fund, 264.
*Rhus vernicifera*, and the milky secretion of, 473.
Rosaniline aurinate, 186, 472.
—— phenate, 186, 470.

## S.

Sacchulmic compounds, note on, 21.
Salt solutions, volume-alteration attending the mixture of, 135.
Samarium, 286.
—— and its compounds, 362.
—— atomic weight of, 365.
—— separation of, 363.
—— spectrum of, 366.
Selenium sulphoxide, two modifications of, 329.
"Seshime-urushi," 473.
Silicon spectrum, 397.
Silk, absorption of different acids by, from different mixtures of acids, 149.
—— absorption of weak reagents by, 142.
Silver, action of chlorine on, 154.
—— action of nitric acid on, 456.
—— spectrum, 396.
Sodic hydrate, absorption of, by wool, silk, and cotton, 145, 147, 148.
Sodium, action of chlorine on, 155.
—— isethionate, 44.
Soil-samples of fairy-rings, preparation and analysis of, 215.
Spectra, homologous, 390.
Steel, condition in which carbon exists in, 303.
Strychnine, action of hydrochloric and hydriodic acid on, 103, 104.
Sulphuric acid, concentrated, residual phenomenon of the electrolysis of, 345.

T.

Tartaric acid, chemistry of, 331.
—— —— influence of heat on solutions of, 334.
—— —— influence of sulphuric acid on the crystallisation of, 336.
Tellurium, a new oxide of, 319.
—— compounds, a new reaction of, 329.
—— monoxide, 319.
—— spectrum, 399.
—— sulphoxide, 323.
β-Tellurium sulphoxide, 327.
Thioxalic ether, 400.
Tin, action of chlorine on, 154.
Toluidine naphthate, 469.
—— phenate, 468.
Trihydroxydiphenyl, 167.

U.

Uranium, fluorine-compounds of, with the alkalis, 131.
—— some fluorine-compounds of, 125.
α- and β-Uranium oxyfluoride, 128.
Uranoso-uranic oxide, action of hydrofluoric acid on, 126.
Uranous fluoride, 127.
Urushi, chemistry of, Part I, 472.
Urushi, diastatic matter of, and its action on urushic acid, 483.
Urushic acid, and its compounds, 475.
β-Urushic acid, 480.
Urushic acid, dinitro-, 480.

V.

Valeraldehyde, condensation of, with acetoacetic ether, 202.
Volume-alteration attending the mixture of salt solutions, 135.

W.

Wackenroder solution, bleaching power of, 355.
Wool, absorption of different acids by, from different mixtures of acids, 149.
—— absorption of weak reagents by, 142.

X.

Xylidine naphthate, 471.

Z.

Zinc, action of chlorine on, 154.
—— spectrum, 394.

# ERRATA IN VOL. XLIII.

| Page. | Line. | |
|---|---|---|
| 234 | 3 from top ..... | *for* 840 *read* 760. |
| 316 | 2 „ bottom ..... | *for* "investigators" *read* "investigations." |
| 391 | 4 „ top ..... | *for* "chemical kinetic energy" *read* "chemical activity, or in other words greater kinetic energy." |
| — | 13 „ „ ..... | *for* "Johnston" *read* "Johnstone." |
| — | 15 „ „ ..... | *for* "faradic" *read* "periodic." |
| 396 | 3 „ bottom ..... | *for* "1 + and K" *read* "H and K." |
| 398 | 13 „ „ ..... | *for* "these facts" *read* "the facts." |
| 399 | 4 „ top ..... | |

*for*

| Copper. wave-lengths. | Tellurium. wave-lengths. |
|---|---|
| 3307·4 | 3307·5 |
| 3290·2 | 3290·0 |
| 3280·5 | 3280·4 (very strong) |
| 3273·6 (very strong) | 3273·8 (very strong) |
| 3264·3 | 3264·4 |
| 3247·3 (very strong) | 3247·2 (very strong) |

*read*

| Copper. Wave-lengths. | Tellurium. Wave-lengths. |
|---|---|
| 3307·0 | 3307·1 |
| 3289·8 | 3289·6 |
| 3280·1 | 3280·0 (very strong) |
| 3273·2 (very strong) | 3273·4 (very strong) |
| 3263·9 | 3264·0 |
| 3246·9 (very strong) | 3246·8 (very strong) |

| | | |
|---|---|---|
| 399 | 24 from top ..... | *for* "silica" *read* "silicon." |
| 411 | 4 „ bottom ..... | *for* "23·7" *read* "33·7." |
| 421 | 3 „ top ..... | *for* $\frac{1}{1}$ *read* $\frac{1}{2}$. |
| 429 | 9 „ „ ..... | *after* "amido-group" *insert* "when the *para*-position is open." |
| 436 | 3 „ bottom ..... | (in footnote) *for* "diazo-" *read* "disazo." |

HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.